

**UNITED STATES DISTRICT COURT
DISTRICT OF MINNESOTA**

Proto Labs, Inc., Plaintiff, v. ICO Products, LLC, Defendant.	Case No. 15-cv-02562 (SRN/JSM) MEMORANDUM OPINION AND ORDER
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SUSAN RICHARD NELSON, United States District Judge

I. INTRODUCTION

This matter is before the Court on the Report and Recommendation (“R&R”) of Magistrate Judge Janie S. Mayeron, dated July 13, 2016 [Doc. No. 20]. The R&R recommends granting the Motion to Dismiss [Doc. No. 7] brought by Defendant ICO Products, LLC (“ICO”). Plaintiff Proto Labs, Inc. (“Proto Labs”) objects to the R&R [Doc. No. 30].

Pursuant to statute, this Court reviews de novo any portion of the magistrate judge’s opinion to which specific objections are made. 28 U.S.C. § 636(b)(1)(C); Fed. R. Civ. P. 72(b); D. Minn. L.R. 72.2(b)(3). Based on that de novo review, and for the

reasons set forth below, the Court sustains Plaintiff's objections, and respectfully declines to adopt the R&R.

II. BACKGROUND

The factual and procedural background of this patent infringement lawsuit has been thoroughly documented in the magistrate judge's R&R, which is incorporated herein by reference. At issue is the validity of four patents granted to Proto Labs between 2004 and 2010: U.S. Patent No. 6,836,699 ("699 patent"), U.S. Patent No. 7,123,986 ("986 patent"), U.S. Patent No. 7,590,466 ("466 patent"), and U.S. Patent No. 7,840,443 ("443 patent") (collectively, the "patents-in-suit"). Each of the four patents relates to the field of mold making, i.e., the fabrication of molds from blocks of metal for use in the manufacture of custom parts. (Compl. [Doc. No. 1], Ex. 1("699 patent"), 1:21-23; *Id.*, Ex. 2 ("986 patent"), 1:11-13; *Id.*, Ex. 3 ("466 patent"), 1:27-29; *Id.*, Ex. 4 ("443 patent"), 1:34-41.) More specifically, the patents-in-suit describe methods by which much of the process of generating a price quotation for the manufacture of a mold or one or more molded or machined parts can be automated, saving the customer time and money and allowing Proto Labs to deliver finished products significantly faster than was possible under the prior art. (*See, e.g.*, Compl., ¶ 1; '466 patent, 2:36-43; Pl.'s Mem. in Opp. to Def.'s Mot. to Dismiss [Doc. No. 16] ("Pl.'s Mem. in Opp."), 2-3.) A complete recitation of the specifications and claims of each patent has been provided in the R&R and it is unnecessary to duplicate them here. For purposes of the discussion that follows, however, a brief summary of the prior art and the salient features of the patents-in-suit is provided.

A. The Prior Art

Proto Labs filed its application for the earliest of the patents-in-suit, the '699 patent, on December 19, 2002. ('699 patent, introductory information.) At that time, the moldmaking industry was undergoing rapid but piecemeal change as traditional methods of mold manufacturing and machining were augmented or replaced based on advances in computer technology. (*Id.* at 2:39-40; 1:51-52.) Traditionally, molds have been designed in an iterative process, involving one or more face-to-face meetings between the moldmaker and the customer, during which the customer shares details regarding the proposed geometry and function of the part, and the moldmaker uses his skill and experience to design the necessary mold. (*Id.* at 1:55-62; 2:21-22.) Often, as the moldmaker considers the design submitted by the customer, he or she will suggest changes designed to aid manufacturability or decrease cost. (*Id.* at 2:22-26.) Because of the difficulty of the task involved and the commensurate expertise required, moldmaking has traditionally been a lengthy, costly process, and moldmakers have been able to command a premium for their services. (*Id.* at 2:26-38.)

By 2002, this traditional paradigm was giving way to various computerized improvements. Most notably, in lieu of traditional paper drawings of the mold or part prepared by hand, customers and moldmakers had begun to rely on the use of Computer-Aided Design ("CAD") software to graphically represent part geometry. (*Id.* at 2:40-46.) Likewise, manually controlled moldmaking equipment was largely being replaced by Computer Numerical Control ("CNC") machines, operated remotely using detailed tool

paths computed using commercially-available Computer-Aided Manufacturing (“CAM”) software. (*Id.* at 2:46-56.)

While these developments had given moldmakers and customers the ability to work with “geometrically complex parts,” the overall process remained “far from completely automat[ed].” (*Id.* at 2:65-67.) Though some tasks had been routinized, numerous decisions remained to be made directly by the moldmaker or the customer, resulting in “long and labor intensive working sessions to produce mold designs and CNC machining instructions for many custom parts.” (*Id.* at 3:1-5, 10-13.) In particular, identifying barriers to manufacturability and generating price quotations remained largely human tasks. (*Id.* at 3:40-46.) This last step was often fraught with risk for the moldmaker—producing a price quotation is often done when the order itself is uncertain, requiring the expenditure of valuable man-hours on non-recoverable costs. (*Id.* at 4:8-11.) Likewise, human error in producing quotes can lead to contractual and manufacturing problems once an order is finalized. (*Id.* at 4:15-26.)

B. The Patents-in-Suit

Against this background of imperfectly completed automation, the patents-in-suit set out generally to eliminate the need for human participation in (1) determining whether a mold or part is capable of manufacture; (2) producing a price quotation for the customer; and (3) determining the necessary tools and tool paths required to produce the desired product. A brief discussion of the features of the ’699 patent, from which the other patents-in-suit generally derive, is illustrative of Proto Labs’ solution.

The process is begun when a customer submits a CAD file to the Proto Labs system defining the surface profile for the part to be molded, either through internet transmission or physical file transfer. (*Id.* at 4:32:34, 5:49-50.) Based on the information contained in the CAD file, a “geometry analyzer module” automatically assesses the part using various acceptability criteria to determine whether the mold for the part can be inexpensively manufactured, given the capabilities of the manufacturer. (*Id.* at 6:2-8.) These acceptability criteria can include, among others: (1) determining whether the part can be molded in a “straight pull” mold (*Id.* at 6:14-15.); (2) determining whether the mold can be formed using a standard set of Computer Numerical Control (“CNC”) machining tools (*Id.* at 7:29-32.); (3) determining whether the part can be molded from aluminum (*Id.* at 8:47-50.); and (4) determining whether the part can be molded using a plastic material selected by the customer (*Id.* at 9:19-23.). If at any time during the process the system determines that the customer’s CAD file fails one or more acceptability criterion, this failure is communicated to the customer, either through a telephone call or by means of an automatically generated computer message, such as an email. (*Id.* at 9:38-45.)

In addition to this failure notification, however, the system includes a “proposed modification CAD file communication module,” which not only stores information about each way in which the initial CAD file fails under one or more acceptability criterion, but generates a modified CAD file indicating ways in which the proposed mold can be modified so as to be manufacturable. (*Id.* at 9:48-65.) The modified CAD file is then transmitted automatically to the customer. All told, the invention describes a

“computerized method for fast identification of the mold manufacturability issues.” (*Id.* at 10:43-45.)

Beyond analyzing CAD files for manufacturability, the ’699 patent also describes a method of automatically generating a price quotation for the proposed mold, and transmitting that quotation to the customer. (*Id.* at 10:65-67.) To do so, the “quoting module” assesses one or more cost parameters which are indicative of the real cost of forming the mold, such as how long it will take to CNC machine the mold, what tools will be used in the process, the size of the part, and whether any features of the mold will require specialized non-CNC machining. (*Id.* at 11:1-3, 15-16, 21-23; 12:10-11, 45-48.) Based on these and other inputs selected from a menu by the customer, the quoting module automatically generates and electronically transmits a price quotation. (*Id.* at 13:5-10.)

Finally, the ’699 patent includes a “tool selection and tool path computation module.” (*Id.* at 16:15-16.) This part of the invention preferably operates in conjunction with the quoting module, and determines what tools and tool paths should be used to most efficiently manufacture the mold for the part specified by the customer’s CAD file. (*Id.* at 19-24.) If desired, the final step in the preferred process includes the actual machining of the mold to the specifications selected by the customer. (*Id.* at 63-65.)

As noted, the methods and systems described in the ’699 patent generally underlie those described in the remaining patents-in-suit. Several additional features designed to further automate the moldmaking process are added by each, however. The ’986 patent, for instance, seeks to create efficiencies where the customer desires to produce more than

one part in a “family mold.” (’986 patent, 1:56-58.) To do so, the described system analyzes one or more CAD files submitted by the customer, and, using a “family quote adjustment module,” determines whether cost savings will result from treating the parts together as a group, rather than molding each part individually. (*Id.* at 6:46-51.) In the process, the module examines multiple independent factors, such as whether more than one desired part can fit into a given mold block, and what the fewest number of mold blocks necessary to complete the order would be. (*Id.* at 6:52-62.) Once the most efficient solution has been determined, a price quote is generated and automatically transmitted to the customer. (*Id.* at 8:40-44.)

In contrast, the ’443 patent expands the scope of automation from molds and molded parts (as described in the original ’699 patent) to include parts that require direct machining on a CNC mill.¹ (’443 patent, 1:34-37.) In so doing, the system analyzes the customer’s CAD file to determine, among other things, whether the part can be machined using a three-axis CNC mill, or whether the part is susceptible both to machining and molding. (*Id.* at 8:26-33, 60-64; 9:50-56; 14:27-29.) The ’443 patent also introduces various advances to the quoting module, including a “reverse quotation” process that allows the customer to set a maximum cost for an order, based upon which various alternative designs and delivery options are automatically generated to meet the proposed budget. (*Id.* at 21:64-65; 22:9-12; 23:10-12.) Finally, and uniquely among the patents-

¹ In contrast to injection molding, which creates parts by filling a cavity with a molten substance (an additive process), machining is a subtractive process, in which a solid block of metal or other material is reamed, drilled, sawed, lathed, cut in chips, or otherwise removed in order to produce the required part. (’443 patent, 1:65-66; 2:41-46.)

in-suit, the '443 patent contemplates providing a portion of the system software to the customer for download or installation on the customer's own computer, in order to enhance security and decrease processing time.

C. History of the Present Dispute

Proto Labs brought this action in May of 2015, alleging that ICO's "ICOQuote" software, released sometime between 2013 and 2015, infringed upon the patents-in-suit. (Compl., ¶ 3.) In lieu of filing an answer, ICO moved to dismiss the Complaint under Rule 12(b)(6) of the Federal Rules of Civil Procedure, arguing that each claim of the patents-in-suit was invalid as a matter of law under 35 U.S.C. § 101. (*See generally* Def.'s Mem. in Supp. of Mot. to Dismiss [Doc. 9] ("Def.'s Mem. in Supp.")). Applying the two-step process recently articulated by the Supreme Court in *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347 (2014), ICO argued that the patents-in-suit do not claim patentable subject matter because, at step one of the *Alice* analysis, they are directed to the abstract idea of "determining and providing a quote to a customer for a mold or molded part," and at step two, the patent claims lack meaningful limitations sufficient to transform the abstract idea into patent-eligible subject matter. (Def.'s Mem. in Supp at 1, 13-25.) Specifically, ICO contended that, upon careful scrutiny, the individual claims of the patents-in-suit reveal nothing more than a description of the steps necessary to perform the underlying abstract idea, but with the twist of generic computer implementation. (*Id.* at 19.) Without more, according to ICO, the patents-in-suit do not rise beyond the sort of claims held invalid by the Supreme Court and Federal Circuit.

(*Id.*)

In response, Proto Labs argued that ICO's characterization of the patents improperly generalized their scope, and urged the magistrate judge to focus on the concrete, non-abstract limitations imposed by the independent and dependent claims of the patents themselves. (Pl.'s Mem. in Opp. at 11.) According to Proto Labs, terms such as "molded part," "CNC machined part," "CNC machined mold," "CAD file," and "menu of customer selectable values" refer to real, concrete objects and concepts that impose clear boundaries on the reach of the patents-in-suit. (*Id.* at 12-19.) To illustrate its point, Proto Labs juxtaposed ICO's characterization of the limitations of the terms (e.g., a molded part as a "product," a CAD file as a "drawing," and a selectable menu as "information") with industry practice and the terms' inherently limited scope. (*Id.* at 12-28.) According to Proto Labs, the inventive concepts of the patents-in-suit still leave many ways to provide a quote for manufacture of an article that are not restricted by the patent claims. (*Id.* at 39.)

Ultimately, the magistrate judge agreed with ICO. Applying the two-part *Alice* test, the court found first that Proto Labs' asserted claims were directed to the abstract idea of "providing a price quotation for the manufacture of a mold or molded part." (R&R at 44.) Relying on the Supreme Court's opinion in *Alice* and several other recent opinions from various courts, the magistrate judge concluded that the patented inventions added little to the traditional process by which moldmakers had always generated price quotations besides the use of a computer. (*Id.* at 44-45.) For similar reasons, the court determined that the claims of the patents-in-suit did not contain an "inventive concept"

sufficient to transform the nature of the claims into a patent-eligible application. In the magistrate judge’s view, the individual claims merely specify that the quotation process be done “automatically” in a computerized environment, but without adequately specifying *how* that automation is to be achieved. (*Id.* at 47-48.) The inclusion of limiting terms such as “CAD file,” “computer menu,” or “molded part,” according to the magistrate judge, did not serve to make the abstract idea of price quotation any less abstract. (*Id.* at 50.) As an example, the court concluded that the supposed difference between a CAD file and a traditional moldmaker’s drawing—urged by Proto Labs as an important distinction—lacked materiality because it was simply another means of performing steps ultimately leading to a quotation for the customer. (*Id.* at 49.)

Proto Labs subsequently filed timely objections to the R&R, leading to this *de novo* review of the matter.

III. STANDARD OF REVIEW

Under Rule 12(b)(6) of the Federal Rules of Civil Procedure, dismissal is warranted where the plaintiff “fail[s] to state a claim upon which relief can be granted.” Fed. R. Civ. P. 12(b)(6). In evaluating a motion to dismiss, the court “must take the well-pleaded allegations of the complaint as true, and construe the complaint, and all reasonable inferences arising therefrom, most favorably to the pleader.” *Morton v. Becker*, 793 F.2d 185, 187 (8th Cir. 1986). Although the complaint need not contain “detailed factual allegations,” it must plead facts sufficient “to raise a right to relief above the speculative level.” *Bell Atlantic Corp. v. Twombly*, 550 U.S. 544, 555 (2007). “Threadbare recitals of

the elements of a cause of action, supported by mere conclusory statements, do not suffice.” *Ashcroft v. Iqbal*, 556 U.S. 662, 678 (2009). While ordinarily only the facts alleged in the complaint are considered in deciding a Rule 12(b)(6) motion, materials attached to the complaint as exhibits, such as patent specifications, “may be considered in construing the sufficiency of the complaint.” *Morton*, 793 F.2d at 187. Further, where the motion to dismiss is based on a claim of patent ineligible subject matter, dismissal will generally be unwarranted unless the “*only* plausible reading of the patent must be that there is clear and convincing evidence of ineligibility.” *JSDQ Mesh Techs. LLC v. Fluidmesh Networks, LLC*, No. 16-cv-212-GMS, 2016 WL 4639140, at *1 (D. Del. Sept. 6, 2016) (emphasis original); *see also Ultramercial, Inc. v. Hulu, LLC*, 722 F.3d 1335, 1339 (Fed. Cir. 2013), *vacated sub nom. WildTangent, Inc. v. Ultramercial, LLC*, 134 S. Ct. 2870 (2014) (same).

In light of the above principles, to succeed on a motion to dismiss is never an easy task. *See United States v. \$37,281.00 in U.S. Currency*, No. 3:06-cv-370-DCK, 2007 WL 2710706, at *5 (W.D.N.C. Sept. 13, 2007). In the context of a patent action, it is made yet more difficult by the presumption of validity that attaches to properly issued patents. *See* 35 U.S.C. § 282(a) (“A patent shall be presumed valid. . . . The burden of establishing invalidity of a patent or any claim thereof shall rest on the party asserting such invalidity.”). Admittedly, not all courts have seen fit to extend this presumption to cases that challenge validity under § 101—a fact that ICO urges on the Court in its briefing on the matter. (Def.’s Mem. in Opp. to Pl.’s Obj. to R&R [Doc No. 32] (“Def.’s Mem. in Opp.”) at 12-13.) Following logic first espoused by Judge Haldane Robert Mayer in a concurrence to a Federal Circuit opinion, *Ultramercial, Inc. v. Hulu, LLC*, 772

F.3d 709 (Fed. Cir. 2014), these courts have reasoned in part that because the Supreme Court has declined to mention or apply any presumption of validity in the § 101 cases it has heard in recent years, the proper inference is that no such presumption should be applied. *See, e.g., Transixtion, Inc. v. Lenovo (U.S.) Inc.*, No. 3:12-cv-01065-HZ, 2015 WL 4203469, at *4 (D. Or. July 9, 2015); *Wireless Media Innovations, LLC v. Maher Terminals, LLC*, 100 F. Supp. 3d 405, 411 (D.N.J. 2015); *Modern Telecom Sys. LLC v. Earthlink Inc.*, No. SA CV 14-0347-DOC, 2015 WL 1239992, at *7 (C.D. Cal. Mar. 17, 2015). The more persuasive view, however—and the apparent majority view—is that “the Supreme Court’s failure to differentiate or distinguish the analysis under § 101 from analyses under §§ 102 and 103 (such sections indisputably covered by the presumption) implies that the presumption also applies to § 101.” *SkillSurvey, Inc. v. Checkster LLC*, No. 15-1766, 2016 WL 1255785, at *5 (E.D. Pa. Mar. 31, 2016); *see also Listingbrook, LLC v. Market Leader, Inc.*, 144 F. Supp. 3d 777, 784 (M.D.N.C. 2015); *Exergen Corp. v. Brooklands Inc.*, 125 F. Supp. 3d 307, 311-12 (D. Mass. 2015); *Tuxis Technologies, LLC v. Amazon.com, Inc.*, No. 13-1771-RGA, 2014 WL 4382446, at *1 (D. Del. Sept. 3, 2014). In line with these considered opinions, the Court will apply the statutory presumption of validity to the patents at issue in the present matter.

IV. DISCUSSION

Under § 101, the range of patentable subject matter includes “any new and useful process, machine, manufacture or composition of matter, or any new and useful improvement thereof.” 35 U.S.C. § 101. Though seemingly broad in scope, the Supreme

Court has read into this statutory text an important implicit exception: “laws of nature, natural phenomena, and abstract ideas are not patentable.” *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1293 (2012) (internal quotations omitted). At the same time, the Court has cautioned against the parallel danger of letting this exception swallow the whole, “[f]or all inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas.” *Id.* Thus, for example, the Court has said that “a process is not unpatentable simply because it contains a law of nature or a mathematical algorithm.” *Diamond v. Diehr*, 450 U.S. 175, 187 (1981). The key task of the courts is to differentiate between “attempts to monopolize the ‘building blocks’ of human ingenuity and those that transform the building blocks into something more.” *SkillSurvey, Inc.*, 2016 WL 1255785, at *1 (quoting *Alice*, 134 S. Ct. at 2354).

To aid in that task, the Court has developed a two-part framework—known variously as the *Mayo* or *Alice* test—to distinguish those patents that “claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts.” *Alice*, 134 S. Ct. at 2355. Under that framework, a reviewing court is instructed to first determine if the patent or patents at issue “are directed to a patent-ineligible concept.” *Id.* If they are, the court is then to “consider the elements of each claim both individually and ‘as an ordered combination’ to determine whether the additional elements ‘transform the nature of the claim’ into a patent-eligible application.” *Id.* (quoting *Mayo*, 132 S. Ct. at 1298, 1297). This second step has been described by the court as a “search for an inventive concept—i.e., an element or

combination of elements that is sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the ineligible concept itself.” *Id.* (quotations omitted).

A. *Alice* Step One

In the brief period since *Alice* was decided, the Supreme Court has not had occasion to further define what constitutes an “abstract idea” for purposes of the *Alice* test. Taking up the task, the Federal Circuit has evidenced a general unwillingness to find computer technology patents valid at step one. *See, e.g., LendingTree, LLC v. Zillow, Inc.*, No. 2015-1186, 2016 WL 3974203, at *4 (Fed. Cir. July 25, 2016); *In re TLI Commc’ns LLC Patent Litig.*, 823 F.3d 607, 612 (Fed. Cir. 2016); *Versata Dev. Group, Inc. v. SAP Am., Inc.*, 793 F.3d 1306, 1333-34 (Fed. Cir. 2015); *Internet Patent Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1348 (Fed. Cir. 2015); *OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1362-63 (Fed. Cir. 2015); *buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1354 (Fed. Cir. 2014). Indeed, to date, the court has only done so on two occasions, first in *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016), and then again in the recent case of *McRO, Inc. v. Bandai Namco Games America Inc.*, No. 2015-1101, 2016 WL 4896481 (Fed. Cir. Sept. 13, 2016). In *Enfish*, the Federal Circuit considered the validity of patent claims directed to a “self-referential” database that utilized an “innovative” logical model that, “[c]ontrary to conventional logical models . . . includes all data entities in a single table, with column definitions provided by rows in that same table.” *Enfish*, 822 F.3d at 1330. In contrast to its earlier post-*Alice*

cases, where it was “clear” that the use of computers in patent claims served no further purpose than as a tool to implement the underlying abstract idea, the court found *Enfish*’s patent claims to be directed to a “specific improvement in the way that computers operate.” *Id.* at 1336, 1337. Similarly, in *McRO*, the Federal Circuit determined that two patents which described a novel method for automatically animating and synchronizing facial expressions of talking animated characters were not directed to an impermissibly abstract idea because, although the claimed methods relied on generic computers and performed a task previously done by humans, they did so in a way that was bounded by specific, limited rules. *McRO*, 2016 WL 4896481, at *8. Not only did the narrowness of the claims serve to focus the patent on a specific idea, they also alleviated concerns about preemption. *Id.* at 25.

While *Enfish* and *McRO* both indicate that the Federal Circuit has not categorically abandoned *Alice*’s first step as a meaningful inquiry, the general trend of its recent § 101 case law remains focused on the search for a scope-limiting “inventive concept” in step two. *See, e.g., TDE Petroleum Data Solutions, Inc. v. AKM Enter., Inc.*, No. 2016-1004, 2016 WL 4271975, at *2 (Fed. Cir. Aug. 15, 2016); *Bascom Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, No. 2015-1763, 2016 WL 3514158, at *5 (Fed. Cir. June 27, 2016); *In re TLI Commc’ns LLC Patent Litig.*, 832 F.3d at 612. Partly this reflects the reality—recognized in both *Enfish* and *McRO*—that a strict divide between the two steps of the *Alice* framework is both difficult to make and not always necessary, so long as the relevant factors are considered at some point along the way. *See McRO*, 2016 WL 4896481, at *7 (“Whether at step one or step two of the *Alice* test, in

determining the patentability of a method, a court must look to the claims as an ordered combination, without ignoring the requirements of the individual steps.”); *Enfish*, 822 F.3d at 1339 (“[I]n other cases involving computer-related claims, there may be close calls about how to characterize what the claims are directed to. In such cases, an analysis whether there are arguably concrete improvements could take place under step two.”).

Whatever the reason for this trend, however, it is one apparently recognized by the parties in the present dispute: Proto Labs has advised the Court both in briefing and at oral argument that disposition of this motion may be most appropriate on the basis of *Alice*’s second step. (See Obj. to R&R on Def.’s Mot. to Dismiss [Doc. No. 28] (“Obj. to R&R”) at 14.) Likewise, ICO has devoted little more than half a page of its brief to the step one analysis. (Def.’s Mem. in Opp. at 14-15.) In light of the apparent positions of the parties, and because the Court ultimately agrees that sufficient factual issues exist at *Alice* step two to preclude dismissal, the Court will—for purposes of this motion—assume without deciding that Proto Labs’ patents are directed to the abstract idea of providing a price quotation for the manufacture of a mold or molded part (*see* R&R at 44.), and proceed to analyze the patents-in-suit under the second step of the *Alice* framework. *See Bascom*, 2016 WL 3514158, at *7 (deferring consideration of factual issues for step two); *Shortridge v. Found. Constr. Payroll Serv., LLC*, No. 2015-1898, 2016 WL 3742816, at *3 (Fed. Cir. July 13, 2016) (noting that because plaintiff conceded that step two of the *Alice* inquiry is “where the whole question is, and that’s what the whole argument is about,” commencement of analysis at the step two stage was proper).

B. *Alice* Step Two

As previously noted, *Alice*'s second step concerns the search for an "inventive concept" sufficient to transform an abstract idea into a patent-eligible application. *Alice*, 134 S. Ct. at 2357. The Federal Circuit has explained that this search involves scouring the patent's individual claim limitations, or the ordered combination of those limitations, for evidence that "the patent in practice amounts to significantly more than a patent upon an ineligible concept itself." *Versata*, 793 F.3d at 1332. Determining when this threshold has been crossed is, unsurprisingly, an inexact science. At the very least, however, the Federal Circuit has made clear that simply "appending purely conventional steps to an abstract idea does not supply a sufficiently inventive concept." *In re Smith*, 815 F.3d 816, 819 (Fed. Cir. 2016). Likewise, a patent that does nothing more than recite "generic computer limitations," *Mortg. Grader, Inc. v. First Choice Loan Servs., Inc.*, 811 F.3d 1314, 1325 (Fed. Cir. 2016) (citation omitted), or rely on a computer "to perform routine tasks more quickly or more accurately" will not pass muster. *OIP Techs.*, 788 F.3d at 1363.

On the other hand, claims that "purport to improve the functioning of the computer itself" or "effect an improvement in any other technology or technical field," are the sort that may be sufficient under *Alice*'s second step. *Alice*, 134 S. Ct. at 2359. Such inventions "are not likely to be so abstract" as to be unpatentable. *Research Corp. Techs. v. Microsoft Corp.*, 627 F.3d 859, 869 (Fed. Cir. 2010). Further, the mere fact that a patent relies on claim elements, that, by themselves, were known in the prior art is not

fatal at step two—“an inventive concept can be found in the non-conventional and non-generic arrangement of known, conventional pieces.” *Bascom*, 2016 WL 3514158, at *6.

In the two years that have elapsed since *Alice* was decided, the Federal Circuit has found a computer technology patent to pass the step two analysis on two occasions. First, in *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014), the court held that the patent claims at issue demonstrated the requisite inventive concept because they claimed a technical solution to a problem unique to the internet. Specifically, prior art systems had evolved to allow third-party merchants to lure a host website’s visitor traffic away from the host website whenever a visitor clicked on the merchant’s advertisement on the host site. *DDR*, 773 F.3d at 1248. The patents purported to solve this problem in a particular, technical way, by sending the viewer to a “hybrid” webpage that combined product information from the merchant’s webpage with the host’s visual elements. *Id.* at 1248-49. As the Federal Circuit later noted, in holding that the patents at issue were patent-eligible in *DDR*, the court had focused on the fact that the patents did not merely “claim all implementations for retaining web viewers,” but rather provided a “specific technical solution . . . to an existing problem.” *Bascom*, 2016 WL 3514158, at *6.

More recently, in *Bascom* itself, the Federal Circuit considered whether a system for filtering internet content was patent-eligible under *Alice*. Looking extensively to the prior art as described in the patent specification, the court noted that though methods of filtering internet content existed when the *Bascom* patent was filed, each such method contained significant inefficiencies and practical limitations. *Id.* at *1-2. In particular,

the court explained that prior art systems suffered from the need for significant human involvement, were easily circumvented, and were often non-customizable “one-size-fits-all” solutions that did not properly meet the needs of all end-users. *Id.* Faced with this state of the art, Bascom patented a unique solution. Where prior methods relied on (a) customizable filters at each user’s local computer, (b) non-customizable filters on a local server, or (c) non-customizable filters on a remote server, Bascom claimed the novel solution of providing customizable filters at the remote server. *Id.* at *2. Taken as a whole, the invention “combine[d] the advantages of the then-known filtering tools while avoiding their drawbacks.” *Id.*

Despite the admitted advances of the Bascom filter, the district court granted AT&T’s motion to dismiss for lack of patentable subject matter. *Id.* at *1. In its *Alice* analysis, the district court concluded that the claims at issue were directed to the abstract idea of “filtering content,” and that they were not saved at step two because “no individual limitation was inventive because each limitation, in isolation, was a well-known, generic computer component or a standard filtering mechanism.” *Id.* at *4 (quotation and citation omitted). The district court further found no inventive concept when the limitations were taken in combination because “filtering software, apparently composed of filtering schemes and filtering elements, was well-known in the prior art” and “using ISP servers to filter content was well-known to practitioners.” *Id.* (quotation and citation omitted). Finally, the court also noted that the absence of specific structure for the generic computer components “raise[d] the likelihood that such claims could preempt every filtering scheme under the sun.” *Id.* (quotation and citation omitted).

In its own review of the matter, the Federal Circuit accepted the district court's conclusion at *Alice* step one, and likewise agreed at step two that each limitation of the claims, taken individually, recited generic computer, network, and internet components (such as "local computers," "ISP servers," "networks," etc.), "none of which is inventive by itself." *Id.* at *6. Where the court disagreed with the district court's assessment, however, was with regard to the ordered combination of limitations imposed by the patent claims. *Id.* Highlighting the procedural posture of the case, the court found that though Bascom's solution utilized conventional pieces, it could not "as a matter of law" be said to have done so in a conventional and generic way. *Id.* Rather, "construed in favor of Bascom as they must be in this procedural posture" the patent claims could be read to describe a means of deploying long-established technologies in a novel and inventive way. *Id.* at *8, 6-7. When so construed, the patent at issue sufficiently "improve[d] an existing technological process" to meet the requirements set forth by the second *Alice* step. *Id.* at *6 (citation and quotation omitted). Further, because Bascom's process "carve[d] out a specific location for the filtering system (a remote ISP server)" it did not, as a matter of law, preempt all use of the underlying abstract idea. *Id.* at *8. Because on the whole the court found "nothing on this record that refute[d]" Bascom's contention that an inventive concept existed in the ordered combination of claim limitations, it vacated the district court's order and remanded for further proceedings. *Id.*

The analysis deployed by the Federal Circuit in *DDR* and *Bascom* makes invalidation of Proto Labs' patents at the motion to dismiss stage premature. Here, as in *Bascom*, the information on the prior art found in the record depicts a state of imperfect

automation, in which some tasks in the moldmaking industry were being done using computer technology (such as the design of molds using CAD/CAM software packages), but with significant gaps in between steps, and with much unnecessary human involvement. (*See, e.g.*, '466 patent, 2:44-3:18.) In particular, the CAD files at the center of the new processes replacing traditional moldmaking had not evolved substantially beyond serving as a new delivery mechanism for transmitting part specifications between customer and moldmaker. (*Id.*) The result was that the process of designing, quoting, and producing a mold or part remained “long and labor intensive.” (*Id.* at 3:15-16.)

Proto Labs’ inventive concept was to recognize that the information contained in the CAD files could be used for more than just graphical representation of a mold or part. Rather, the data contained in the CAD file could be assessed against the moldmaking capabilities of the manufacturer to rapidly and automatically identify issues with manufacturability, suggest necessary changes, and produce a quote based on the part’s physical properties—all without human intervention. (*See, e.g.*, '699 patent, 6:2-8; 9:48-65; 10:65-67.) The result was “a computerized method for fast identification of . . . mold manufacturability issues” that substantially automated the pre-manufacturing process “[i]n ways that ha[d] never been before contemplated in the moldmaking art.” ('466 patent, 10:36-39.) *Cf. McRO*, 2016 WL 4896481, at *8-10 (holding system that automated previous subjective human tasks using limited mathematical rules to be patent-eligible). Taking these facts to be true—as the Court must at this stage in the litigation—it cannot be said as a matter of law that Proto Labs’ method of automating mold

acceptance and quote generation is conventional and generic such that no inventive concept can be found. *Cf. Bascom*, 2016 WL 3514158, at *6; *see also Iron Gate Sec., Inc. v. Lowe's Cos.*, 15-cv-8814 (KBF), 2016 WL 4146140 (S.D.N.Y. Aug. 3, 2016) (noting at motion to dismiss stage that “the Court is not in a position on this record to make findings of fact as to whether the advantages over prior art asserted in the specification are correct”).

Similarly, the Court sees nothing in the record that establishes that the “*only* plausible reading of the patent[s]” is that Proto Labs’ method serves to preempt all ways of generating a computerized price quotation for a mold or molded part. *JSDQ Mesh Techs.*, 2016 WL 4639140, at *1 (emphasis original). On the contrary, the patents-in-suit “recite a specific, discrete implementation” of that abstract idea. *Bascom*, 2016 WL 3514158, at *7. As Proto Labs notes in its briefing on the matter, every one of the seventy-nine claims made in the four separate patents is dependent in the first instance on the existence of a CAD file—a discrete method of data presentation and transfer that presumably leaves many other methods untouched by the patents-in-suit. (Obj. to R&R at 12.) *Cf. DDR*, 773 F.3d at 1259 (noting that no preemption issue existed where at-issue patent claimed only one possible method of making two web pages look similar, leaving other avenues available). Although ICO advises the Court in response that the use of CAD files is both ubiquitous in the industry and functionally indistinguishable from any other means of delivering geometric data (*see* Def.’s Mem. in Opp. at 20-21), the Court is constrained to accept the facts embraced by the complaint and its supporting documents. On that bare record, the Court again cannot say as a matter of law that Proto Lab’s patents so clearly “monopolize the abstract idea” as to transgress the bounds of patent-eligibility.

Bascom, 2016 WL 3514158, at *7 (quotation and citation omitted); *see also McRO*, 2016 WL 4896481, at *9 (“Defendants again rely on the patents’ description of one set of rules, but the description of one set of rules does not mean that there exists only one set of rules, and does not support the view that other possible types of rules with different characteristics do not exist. The only information cited to this court about the relationship between speech and face shape points to the conclusion that there are many other possible approaches to automating lip synchronization using rules.”).

ICO acknowledges *Bascom*’s importance as precedent in this matter, but urges the Court to consider a more recent Federal Circuit case—*Electric Power Group, LLC v. Alstom S.A.*, No. 2015-1778, 2016 WL 4073318 (Fed. Cir. Aug. 1, 2016)—that it feels more properly matches the facts of this case. Certainly, superficial similarities do exist: in *Electric Power*, the patents at issue described and claimed “systems and methods for performing real-time performance monitoring of an electric power grid by collecting data from multiple data source, analyzing the data, and displaying the results.” *Id.* at *1. In its assessment of those claims at *Alice* step two, the Federal Circuit concluded that no inventive concept was present because, although the claims provided lengthy enumeration of the types of information to be gathered by the system, they did not go beyond “merely selecting information, by content or source, for collection, analysis, and display.” *Id.* at *4. At bottom, the court found that the claims did nothing that would “transform the otherwise-abstract process of information collection and analysis” by the use of an inventive method that would “generate new data.” *Id.*

A critical difference exists between the present case and *Electric Power* that is not

discussed in ICO's briefing, however, and renders a detailed comparison unfruitful. In *Electric Power*, the Federal Circuit was reviewing a case that had been disposed of on summary judgment, meaning that the court had the benefit of a fully developed factual record that could expose and resolve contested issues relating to the state of the prior art, claim construction, preemptive effect, etc. Thus, for instance, the court could say with confidence that Electric Power's claims did not require "new techniques" for analyzing information, or that it did not generate any "new data," and know that those conclusions were based on detailed facts. *See id.* at *4. Here, however, where Proto Labs asserts in its complaint and attached exhibits that its method takes conventional computer technology and uses it to harness old data in new ways and for new purposes, the Court has no basis on which to disagree. At a later stage in the litigation, perhaps, but at the motion to dismiss stage such a conclusion would be premature. *Cf. JSDQ Mesh Techs.*, 2016 WL 4639140, at *4.

V. CONCLUSION

In light of the procedural posture and Federal Circuit precedent, the Court concludes that Proto Labs has adequately alleged that the claims of the patents-in-suit are sufficient—at minimum—to pass the second step of *Alice*'s two-part framework. Nothing in the record refutes those allegations as a matter of law, or justifies dismissal under Rule 12(b)(6). *Bascom*, 2016 WL 3514158, at *8.

THEREFORE, IT IS HEREBY ORDERED THAT:

1. Plaintiff's Objections to the Magistrate Judge's July 13, 2016 Report and Recommendation on Defendant's Motion to Dismiss [Doc No. 28] are **SUSTAINED**;
2. The Court respectfully **DECLINES** to adopt the Report and Recommendation [Doc. No. 20]; and
2. Defendant's Motion to Dismiss for failure to state a claim [Doc. No. 7] is **DENIED** without prejudice.

Dated: September 16, 2016

s/Susan Richard Nelson
SUSAN RICHARD NELSON
United States District Judge